

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION

CLEANUP AND ABATEMENT ORDER NO. 91-47

THRIFTY OIL COMPANY

STATION NO. 112  
1484 EAST WASHINGTON, EL CAJON  
SAN DIEGO COUNTY

The California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board) finds that:

1. Thrifty Oil Company (hereinafter the discharger) owns property located at 1484 East Washington in El Cajon, California. The property is currently a Thrifty retail gasoline station, Station No. 112. The site is located on the northeast corner of the intersection of Jamacha and Washington. Attachment 1 to this Order is a location map for this site.
2. By Official Notice dated August 28, 1986 the Hazardous Materials Management Division of the County of San Diego Department of Health Services (hereinafter HMMD) directed Thrifty Oil Company to submit a written Unauthorized Release Report for a failed precision test for an unleaded tank at Thrifty Station No. 112 within 5 working days of receipt of the Official Notice, and to submit status reports to the HMMD every 3 months until cleanup is complete.
3. By letter dated September 9, 1986 from Straw and Gilmartin, counsel for Thrifty, Straw and Gilmartin provided an update to the HMMD on the status of Station No. 112, and confirmation of agreements reached in a meeting with HMMD staff on September 3, 1986. The letter states that Groundwater Technology, consultants for Thrifty, conducted a subsurface investigation for Station No. 112 and reported petroleum hydrocarbon contamination in unsaturated soils of less than 100 mg/kg (parts per million [ppm]) and dissolved hydrocarbon levels in ground water less than 5-10 ppm. The letter also states that the HMMD agreed that Thrifty may submit a written report of the subsurface investigation and the tank tightness test report as the Unauthorized Release Report.
4. By letter dated September 12, 1986, Straw and Gilmartin transmitted to the HMMD and the Regional Board underground tank system tightness reports, and an August 18, 1986 "Contaminant Assessment Report" prepared by Groundwater Technology for Arco Petroleum Products. The tank tightness reports are dated between August 11 and August 25, 1986 for 5 underground storage tanks containing unleaded, super unleaded, and regular gasoline. Four of the tanks tested tight, and the vent line to the tank that failed was replaced and retested as tight on August 25, 1986.

The August 18, 1986 Groundwater Technology report states the following:

- a. The purpose of the site assessment was to identify the presence of any soil contamination.
  - b. On August 7, 1986, 2 monitoring wells were drilled on either side of the tank cluster, and 4 borings were drilled around the pump islands and product lines.
  - c. Ground water was encountered at 18 feet and the regional gradient is reportedly to the northwest.
  - d. Soils underlying the site consist of silty clays with coarse-grained sand lenses extending 25 feet down to a relatively impermeable clay layer of approximately 10 foot thickness, underlying the clay layer is a very coarse grained sand.
  - e. One soil sample per boring was submitted for analysis of total petroleum hydrocarbons (TPH). The highest TPH value was 68 mg/kg (parts per million [ppm]) at a depth of 10 feet.
  - f. No free product was noted in either of the 2 monitoring wells. Groundwater samples from the 2 wells were submitted for analysis of total petroleum hydrocarbons (TPH), and a high of 3.3 ppm TPH was reported.
5. By letter dated October 15, 1986 to the HMMD, Straw and Gilmartin provided an update to the Unauthorized Release Report. The letter states that Thrifty Oil has not taken any remedial action at Station No. 112 to date, and awaits the HMMD's decision as to whether any remedial action will be necessary.
6. By letter dated December 1, 1986 to Straw and Gilmartin, the HMMD commented on the September 12, 1986 and October 15, 1986 updates for Station No. 112 submitted by Straw and Gilmartin. The letter states well and boring permits were not obtained by Thrifty or its consultants for the site, as required by the County, and the letter points out that the site is located in a beneficial-use groundwater basin. The letter further states that additional site assessment with cleanup alternatives is necessary.
7. By letter dated January 14, 1987 to the HMMD, Straw and Gilmartin state that Thrifty would like to further discuss with the HMMD the need for additional site assessment. The letter also states no further site investigation or cleanup has taken place since the initial site investigation conducted by Groundwater Technology in August of 1986.

8. By letter dated August 21, 1987 to the discharger, the HMMD states that the file for Station No. 112 has been reviewed and it is the position of the HMMD that further site assessment is necessary. The letter also requests an update for Station No. 112 by October 1, 1987, and points out that the last update for Station No. 112 was dated January 14, 1987.
9. An update for Station No. 112 was provided by letter dated September 30, 1987 from Thrifty Oil to the HMMD. Two additional groundwater wells were installed September 11, 1987, and groundwater samples were submitted for analysis and the discharger is awaiting the results. A groundwater and soil remediation system is being designed by Thrifty's consultant Groundwater Technology.
10. On October 22, 1987 HMMD staff observed removal of a 550 gallon waste oil tank from Station No. 112. HMMD staff noted 5-6 holes on the bottom of the tank.
11. By Official Notice dated October 23, 1987 to Thrifty Oil, the HMMD directed Thrifty to take immediate action to prevent further release at Station No. 112, determine the extent and impact of the release, submit a written Unauthorized Release Report within 5 working days of receipt of the Notice, and complete any required cleanup.
12. The discharger provided an update on the status of Station No. 112 to the HMMD in a letter dated October 30, 1987. The letter states analytical results for the groundwater samples collected on September 11, 1987 will be forwarded to the HMMD with a report when available.
13. In a letter to the HMMD dated November 18, 1987, the discharger transmitted an October 30, 1987 report prepared for Thrifty by Groundwater Technology entitled "Subsurface Investigation, Thrifty Service Station No. 112." The report contains the following information:
  - a. Four (4) borings were drilled September 11, 1987 and 2 were converted to groundwater monitoring wells.
  - b. Depth to ground water is approximately 6 feet, gradient is estimated at 2-3% to the west/northwest, and flow velocity is estimated to be 64 ft/yr.
  - c. A soil sample for each boring was composited from samples collected at depths of 5 ft, 10 ft, and 15 ft, and analyzed for TPH and benzene, toluene, ethylbenzene, and xylenes (BTEX). A high of 124.1 ppm TPH with no detectable BTEX was reported for the four soil samples.
  - d. After two hours of accumulation, one of the borings had about 1/2 inch of dark brown free product in it.

- e. On October 1, 1987, groundwater samples were collected from the 4 monitoring wells on-site. The analysis for TPH and BTEX indicated a high of 35 ppm TPH, 2.57 ppm benzene, 5.53 ppm toluene, 0.33 ppm ethylbenzene, and 2.67 ppm xylenes.
14. By letter dated November 19, 1987, the HMMD directed the discharger to provide a monthly written update report for Station No. 112.
15. In a letter dated December 8, 1987 to the discharger, the HMMD outlined cleanup levels for the soil and ground water and stated the site investigation dated October 30, 1987 is inadequate and does not define the vertical and horizontal extent of contamination in the soil, or the horizontal extent of contamination in the ground water. The letter also requested a complete site assessment report by January 13, 1987.
16. In a letter dated December 23, 1987 to the HMMD, Thrifty Oil stated the waste oil tank at Station No. 112 had not been used since 1973 and the holes in the tank had most likely developed since that time. The 2 soil samples reportedly collected at 2 feet below the waste oil tank were analyzed for total extractable hydrocarbons (TEH), benzene, toluene, xylene (BTX), and organic lead. Analytical results indicated 30 ppm TEH, and nondetectable concentrations of BTX and organic lead. The letter further states a remediation workplan for shallow ground water will be submitted to the HMMD when available. Thrifty proposes that the waste oil tank closure be considered final and no further action be taken.
17. By letter dated January 7, 1988, the HMMD requested the discharger to submit by February 1, 1988 the chain of custody that accompanied the samples reported in Thrifty's December 23, 1987 letter.
18. Thrifty Oil transmitted to the HMMD by letter dated January 18, 1988 a copy of the chain of custody for the 2 samples taken from the waste oil tank pit, and a hazardous waste manifest for 150 gallons of triple rinsate.
19. Another letter of January 18, 1988 from the discharger to the HMMD transmitted a January 12, 1988 "Site Assessment Proposal, Thrifty Station No. 112" prepared by Groundwater Technology. The proposal states the following:
  - a. On December 3, 1987 Groundwater Technology conducted a subsurface investigation that included soil and groundwater analyses from an unspecified number of borings, and presented the results in a report submitted to Thrifty on December 9, 1987.

- b. Ground water was encountered during drilling at a depth of approximately 10 feet, and the regional groundwater gradient is to the west towards the San Diego River Valley.
  - c. Three 30 foot borings were proposed to assess hydrocarbon contamination in the soil to the northwest and northeast of the underground storage tanks.
  - d. Soil samples were proposed to be collected at 5 foot and 10 foot depths and submitted for analysis of TPH, BTEX, and organic lead and flashpoint for the sample with the highest TPH.
  - e. Each boring was proposed to be completed to a 4" groundwater monitoring well to determine the groundwater gradient, monitor for free product, and collect groundwater samples for TPH, BTEX, and organic lead.
20. By letter dated January 29, 1988 to the HMMD, Thrifty Oil Company states that it will await the HMMD's reply to the January 12, 1988 Site Assessment Proposal prior to its implementation.
21. By letter dated February 9, 1988 to the discharger, the HMMD states that the January 12, 1988 Site Assessment Proposal is not adequate to define migration of contamination and the HMMD requests that an additional monitoring well be installed. The letter also requests that a remediation plan be submitted upon completion of the investigation.
22. By another letter dated February 9, 1988 to the discharger, the HMMD states that no further action is indicated for the mitigation of the 550 gallon waste oil tank at Station No. 112.
23. In a letter to the HMMD dated February 29, 1988, the discharger states that the additional monitoring well required by the HMMD will be addressed in a revised proposal to be sent to the HMMD by March 11, 1988.
24. By letter dated March 21, 1988 to the HMMD, the discharger transmitted the Site Assessment Proposal dated January 12, 1988 prepared by Groundwater Technology, Inc. The proposal was not revised except for the addition of a proposed monitoring well on the plot plan.
25. By letter dated April 28, 1988 to the discharger, the HMMD points out that the Site Assessment Proposal dated January 12, 1988 indicates only 3 monitoring wells will be installed, however, the plot plan and Thrifty's March 21, 1988 letter indicate that 4 monitoring wells will be installed. The letter states it is HMMD staff's understanding that 4 wells will be installed.

26. In a letter dated May 31, 1988 to the HMMD, the discharger states that contracts for the installation of wells at the site will be issued this month.
27. By letter dated June 29, 1988 to the HMMD, the discharger states that contracts were written June 21, 1988 for the installation of 4 wells for Station No. 112.
28. By letter dated August 25, 1988 to the discharger, the HMMD requests a written update within 2 weeks to a failed precision test reported for the site.
29. By letter dated September 8, 1988 to the HMMD, the discharger states that following the failed precision test of August 11, 1988, the 2-5000 gallon super unleaded tanks were exposed, repairs were made, and the tanks were retested as tight August 17, 1988. Copies of the August 11 and 17, 1988 tank system tightness tests were enclosed with the letter. Thrifty further states in the letter that no visible contamination was encountered during excavation, consequently the amount of substance released is considered insignificant.
30. By letter dated September 19, 1988 to the discharger, staff of the HMMD state that the failed precision test has been resolved to the HMMD's satisfaction and that no further action is required at present.
31. By another letter dated September 19, 1988 to the discharger, the HMMD states that a report prepared by Hydrotech dated August 23, 1988 has been reviewed and based on the reported concentrations of petroleum hydrocarbons in the soil and ground water at Station No. 112, remediation is necessary. The letter requests that a schedule for site remediation be submitted with the update report due November 1, 1988.
32. By letter dated February 21, 1989 to the discharger, the HMMD reported that on January 23, 1989 staff of the HMMD inspected monitoring wells at Station No. 112 and observed structural deficiencies. The letter outlines the deficiencies and requests that they be corrected within 45 days to prevent further subsurface degradation.
33. By letters dated June 16, 1989 from Thrifty Oil to its consultants, Hydrotech Consultants, Inc. and Groundwater Technology, Inc., Thrifty requests the two firms to correct the monitoring well deficiencies, described in the February 21, 1989 HMMD letter, by June 30, 1989.

34. The discharger submitted Status Reports to the HMMD by letters dated September 1, 1989, October 1, 1989, November 1, 1989, December 1, 1989, December 29, 1989, May 1, 1990, and June 30, 1990. The status for Station No. 112 remained unchanged from September 1, 1989 to June 30, 1990. Thrifty states that proposals have been requested from several consultants for the design of a soil/groundwater remediation system and a plan will be submitted for HMMD approval when it is available.
35. By letter dated June 27, 1990 to the discharger, the HMMD states the last site information received by the HMMD for Station No. 112 was a August 23, 1988 Hydrotech Consultants' report summarizing site conditions as of July 1988. The letter points out that monthly reports submitted by the discharger between January 1989 and June 1990 have repeatedly stated that Thrifty has requested proposals from consultants for a soil and groundwater remediation system. The letter requests that the following information be submitted within 30 days of receipt of the letter: analytical results for TPH and BTEX in all wells, and a site map with the contaminant plume and gradient shown. The letter also requests that the discharger provide the name of a selected consultant and their remediation plan within 90 days of receipt of the letter.
36. Analytical results for groundwater samples collected from the wells at Station No. 112 on August 27, 1990 were sent to the HMMD with a letter dated October 3, 1990 from Thrifty. A film of free product was found in one well, while another well had more than one foot of free product. The greatest concentration of TPH and benzene from those wells without free product indicated 1390 ug/l (parts per billion [ppb]) TPH and 341 ppb benzene. Thrifty states in the letter that the well with more than a foot of free product will be bailed weekly, and a recovery system plan will be submitted to the HMMD for approval.
37. By memorandum dated October 15, 1990 to Regional Board staff, staff of the HMMD provide an update on the status of Station No. 112. The HMMD points out that analytical results requested from the discharger to be submitted by approximately August 1, 1990 were received October 9, 1990, and no site map with the contaminant plume or groundwater gradient was provided. Furthermore, the HMMD has not received a cleanup plan requested by the HMMD to be submitted by approximately October 1, 1990.
38. By letter dated February 1, 1991 to the HMMD, the discharger states that free product is being bailed on a weekly basis for Station No. 112, a quarterly report of product removal will be sent to the HMMD, and at present product thickness is a film in one well and approximately 3/4 inch in another well.

39. The "Comprehensive Water Quality Control Plan Report, San Diego Basin (9)" (hereinafter Basin Plan) was adopted by this Regional Board on March 17, 1975 and approved by the State Water Resources Control Board on March 20, 1975. Subsequent revisions to the Basin Plan have also been adopted by the Regional Board and approved by the State Board.
40. Station No. 112 at 1484 East Washington in El Cajon is located in the El Cajon Hydrologic Subarea of the Lower San Diego Hydrologic Area of the San Diego Hydrologic Unit, as described in the Basin Plan.
41. The Basin Plan has established the following potential or designated beneficial uses for the surface water in the El Cajon Hydrologic Subarea:
  - a. Municipal and Domestic Supply
  - b. Industrial Service Supply
  - c. Water Contact Recreation
  - d. Non-Contact Water Recreation
  - e. Warm Freshwater Habitat
  - f. Cold Freshwater Habitat
  - g. Wildlife Habitat
  - h. Preservation of Rare and Endangered Species
  - i. Fish Spawning
42. The Basin Plan has established the following potential or designated beneficial uses for the ground water in the El Cajon Hydrologic Subarea:
  - a. Municipal and Domestic Supply
  - b. Agricultural Supply
  - c. Industrial Service Supply
  - d. Industrial Process Supply
  - e. Groundwater Recharge
43. This enforcement action is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000 et seq.) in accordance with Section 15321, Chapter 3, Title 14, California Administrative Code.

IT IS HEREBY ORDERED THAT, pursuant to Section 13304 of the California Water Code, Thrifty Oil Company shall comply with the following Directives:

1. No later than October 1, 1991 the discharger shall provide to the Regional Board Executive Officer a technical report with the results of a complete and comprehensive site assessment for Station No. 112. The report must include the following information:
  - a. A site map showing the location of the underground storage tank system, the location of any former underground storage tank systems, the location and depth of underground utilities such as telephone and gas lines, and the location of all borings and monitoring wells.
  - b. A discussion of the products currently stored in the underground storage tanks system and any other products that were historically stored.
  - c. Boring logs and monitoring well construction details for all borings and monitoring wells that are installed on-site or off-site.
  - d. A description of the soil types underlying the site, the depth to first ground water, groundwater gradient and flow direction, and free product thicknesses, where it is detected, in all of the wells.
  - e. A description of the soil and groundwater sampling protocol employed, including:
    - i. equipment used
    - ii. decontamination between borings and samples
    - iii. well purging procedure
    - iv. sample collection methods
    - v. sample preservation
    - vi. sample management
    - vii. quality assurance/quality control
  - f. A copy of the laboratory analytical results from a California Department of Health Services certified laboratory and the chains of custodies for the soil and groundwater samples that are submitted for analysis. Soil and groundwater samples must be analyzed for the following constituents by the methods noted:

Total Petroleum Hydrocarbons	DOHS TPH Method
Benzene, Toluene, Ethylbenzene, Xylenes (BTEX)	EPA Method 8020
Total Lead	EPA Method 7421

- g. Sufficient analytical data from soil and groundwater samples to define the concentrations and vertical and horizontal extent of the petroleum hydrocarbon contamination in both the soil and ground water at the site, and any affected areas that exist off-site.
  - h. Documentation for the proper disposal of contaminated soil and/or ground water removed from the site.
  - i. A site map showing all adjacent land uses.
  - j. A description of groundwater supply wells and surface waters within 1/2 mile of the site.
2. In the interim period prior to complete implementation of remedial actions, the discharger shall immediately immobilize and recover all free product from the affected groundwater zone, and immobilize the dissolved product in the soil and ground water to prevent off-site migration of either free or dissolved product. Per Directive No. 5 of this Order, quarterly progress reports to the Regional Board Executive Officer must document these activities.
3. No later than December 1, 1991, the discharger shall submit a technical report to the Regional Board Executive Officer which identifies and discusses a range of remedial alternatives using best available technology to achieve the following cleanup levels, or better, for the petroleum hydrocarbon contamination in the ground water and soil at Station No. 112.

- a. Treatment of the ground water to the following levels:

<u>Constituent</u>	<u>Concentration</u>
Total Petroleum Hydrocarbons (TPH)	1 mg/l
Benzene	1 ug/l
Toluene	100 ug/l
Ethylbenzene	680 ug/l
Xylenes	1750 ug/l
Lead	50 ug/l

- b. Treatment and/or removal of soil with petroleum hydrocarbon constituents in excess of 100 mg/kg Total Petroleum Hydrocarbons (TPH). Should future information indicate that this soil cleanup level does not prevent a discharge of petroleum hydrocarbons in excess of the levels given in Directive No. 3 (a), the soil cleanup level will be subsequently lowered in order to protect groundwater quality.

4. The alternatives for remedial action proposed by the discharger will be evaluated by Regional Board staff and, where appropriate, other regulatory agencies. Based on this evaluation, a cleanup alternative will be selected by Regional Board staff and the discharger notified to initiate its implementation.
5. In addition to the site assessment and remedial action alternatives reports required by Directive Nos. 1 and 3, respectively, the discharger shall submit quarterly progress reports to the Regional Board Executive Officer until the site has been adequately mitigated in accordance with Directive No. 9. The quarterly reports shall contain the following information:
  - a. A site map showing all boring and monitoring well locations, the estimated extent of both dissolved and free product in the ground water, hydrologic contours and groundwater gradient.
  - b. The water levels and product thicknesses, if any, in all of the wells.
  - c. The analytical results from a California Department of Health Services certified laboratory for groundwater samples collected from all monitoring wells. Include all chain of custody documentation. All water samples must be analyzed for the following constituents by the methods noted:

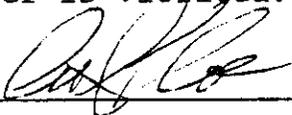
Total Petroleum Hydrocarbons	DOHS TPH Method
Benzene, Toluene, Ethylbenzene, Xylenes (BTEX)	EPA Method 8020
Total Lead	EPA Method 7421
  - d. A tabulated history of all soil and groundwater samples collected to date.
  - e. The dates of product recovery, the quantity of product recovered for the quarter, the total to date, its ultimate disposal point, and hazardous waste manifests of receipts to document disposal.
  - f. The quantity of ground water extracted for the quarter, the total to date, and its ultimate disposal point.
  - g. The status of remediation for the site.

The quarterly progress reports shall be submitted to the Regional Board office in accordance with the following schedule:

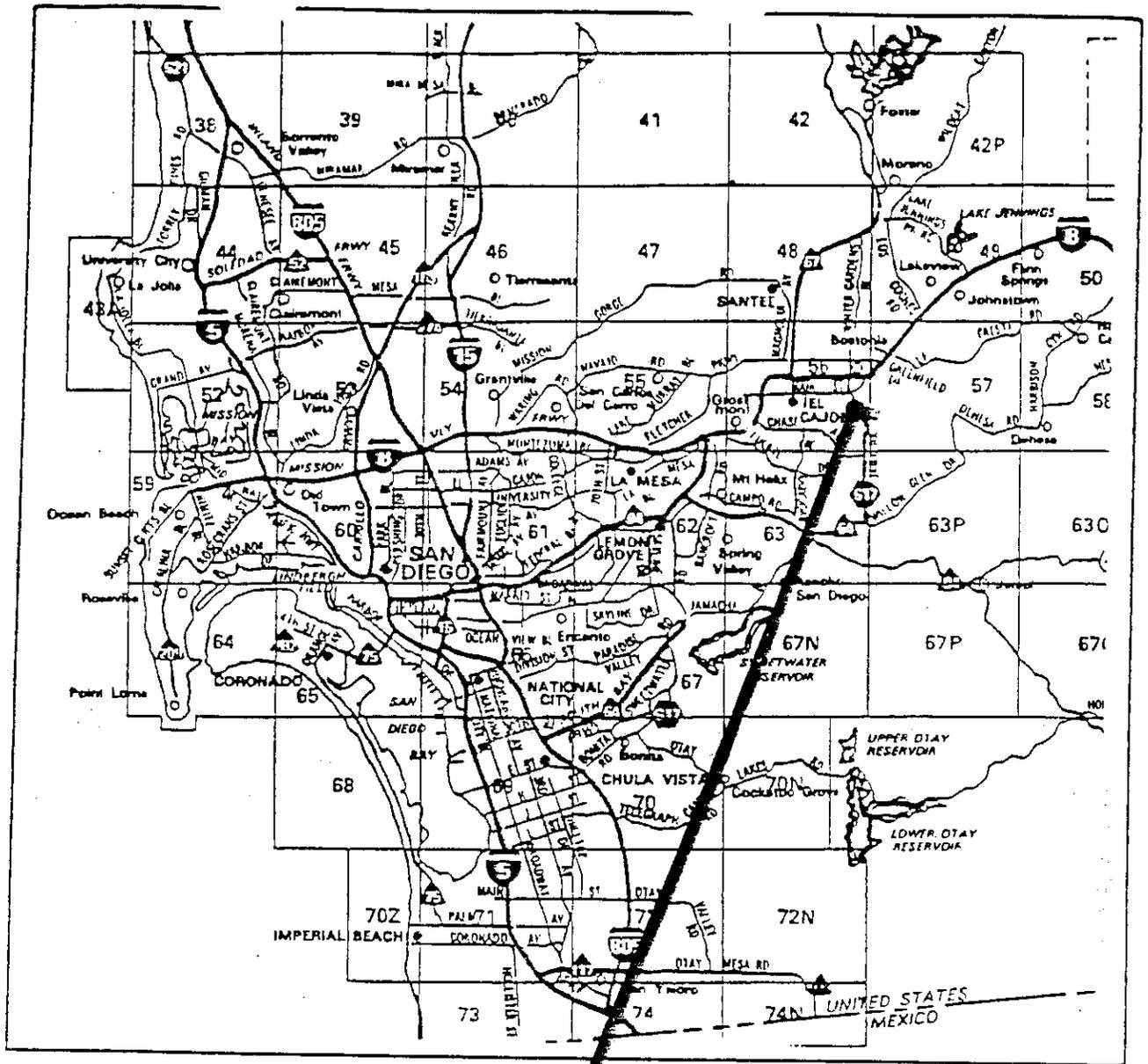
<u>Reporting Period</u>	<u>Date Due</u>
January, February, March	April 30
April, May, June	July 31
July, August, September	October 31
October, November, December	January 31

6. The discharger shall dispose of all contaminated ground water and/or soil associated with Station No. 112 in accordance with all applicable local, state, and federal regulations.
7. The discharger shall obtain all necessary permits for assessment and remedial activities associated with the cleanup at Station No. 112.
8. All reports mentioned in the Directives above should be submitted to the Hazardous Materials Management Division of the County of San Diego Department of Health Services as well as to this Regional Board office.
9. After the discharger demonstrates to the Regional Board Executive Officer's satisfaction that the final cleanup levels have been achieved throughout the soil and groundwater contamination zones, the discharger shall continue to monitor the ground water and submit quarterly monitoring reports in accordance with Directive No. 5 of this Order for a period of one year. If at any time during this post-cleanup monitoring the data indicate that the final cleanup levels have not been maintained, the discharger shall immediately resume appropriate remedial cleanup actions.
10. Under Section 13350 of the California Water Code, any party who intentionally or negligently violates any Cleanup and Abatement Order issued by a Regional Board is subject to civil liability imposed by a Regional Board in an amount which shall not exceed five thousand dollars (\$5000) for each day the Cleanup and Abatement Order is violated.

Ordered by: \_\_\_\_\_

  
Arthur L. Coe  
Executive Officer  
Regional Water Quality Control Board  
San Diego Region

Dated: May 29, 1991



SITE



FIGURE 1

SITE: THRIFTY SS# 1:2
SITE LOC: 1484 E. WASHINGTON, EL CAJON,
MAP TYPE: SITE LOCATION

ATTACHMENT 1

